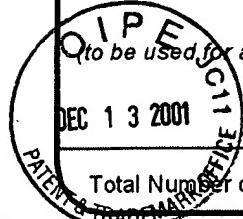


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(modified) PTO/SB/21 (6-98)  
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# TRANSMITTAL FORM



Total Number of Pages in This Submission

Application Number	09/905,666
Filing Date	11/5 July 13, 2001
First Named Inventor	Lorraine J. Giver
Group Art Unit	Unassigned
Examiner Name	Unassigned
Attorney Docket Number	02-106820US

## ENCLOSURES (check all that apply)

- Fee Transmittal Form  
 Fee Attached  
 Amendment / Response  
 After Final  
 Affidavits/declaration(s)  
 Extension of Time Request  
 Express Abandonment Request  
 Information Disclosure Statement  
 Certified Copy of Priority Document(s)  
 Response to Missing Parts/ Incomplete Application  
 Response to Missing Parts under 37 CFR 1.52 or 1.53

- Assignment Papers (for an Application)  
 Drawing(s)  
 Licensing-related Papers  
 Petition Routing Slip (PTO/SB/69) and Accompanying Petition  
 Petition to Convert to a Provisional Application  
 Power of Attorney, Revocation Change of Correspondence Address  
 Terminal Disclaimer  
 Small Entity Statement  
 Request for Refund

- After Allowance Communication to Group  
 Appeal Communication to Board of Appeals and Interferences  
 Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  
 Proprietary Information  
 Status Letter  
 Additional Enclosure(s) (please identify below):  
  
receipt acknowledgment postcard  
1449  
Cited References

## Authorization to Charge Deposit Account

Please charge Deposit Account No. 50-0893 for any additional fees associated with this paper or during the pendency of this application, including any extensions of time for consideration of the documents enclosed.

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Jonathan Alan Quine Reg. No. 41261, The Law Offices of Jonathan Alan Quine
Signature	
Date	11-7-01

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: November 7, 2001

Typed or printed name	Amelia Groth
Signature	

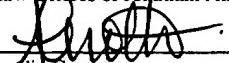
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Assistant Commissioner for Patents,  
Washington, D.C. 20231,  
On November 7, 2001

The Law Offices of Jonathan Alan Quine

By   
Amelia Groth

Attorney Docket No. 02-106820US  
Client Ref. No. 0184.310US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Lorraine J. Giver, *et al.*

Application No.: 09/905,666

Filed: July 13, 2001

For: NOVEL LIPASE GENES

Examiner: Unassigned

Art Unit: Unassigned

INFORMATION DISCLOSURE  
STATEMENT UNDER 37 CFR § 1.97 and  
§ 1.98

Assistant Commissioner for Patents  
Washington , D.C. 20231

Sir:

The references cited on attached form PTO-1449 are being called to the attention of the Examiner. Copies of the references are enclosed. It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement, since it is being submitted prior to the first Office Action. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 50-0893. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,



Jonathan Alan Quine  
Reg. No. 41,261

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(Modified) PTO/SB/08A-B (10-96)  
Approved for use through 10/31/99. OMB 0651-0031

Substitute for form 1449A-B/PTO

INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(use as many sheets as necessary)

		Complete if Known		
		Application Number	09/905,660	
		Filing Date	July 13, 2001	
		First Named Inventor	Lorraine J. Gliver	
		Group Art Unit	Unassigned	
		Examiner Name	Unassigned	
		Attorney Docket Number	02-106820US	

U.S. PATENT DOCUMENTS				
Examiner Initials	Cite No.	U.S. Patent Document Number	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY
	AA	5,512,463	Stemmer	04-30-1996
	AB	5,514,588	Varadaraj	05-07-1996
	AC	5,605,793	Stemmer	02-25-1997
	AD	5,763,239	Short et al.	06-09-1998
	AE	5,789,228	Lam et al.	08-04-1998
	AF	5,811,238	Stemmer et al.	09-22-1998
	AG	5,814,473	Warren et al.	09-29-1998
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	AI	5,830,696	Short	11-03-1998
	AJ	5,830,721	Stemmer et al.	11-03-1998
	AK	5,834,252	Stemmer et al.	11-10-1998
	AL	5,837,458	Minushull et al.	11-17-1998
	AM	5,866,363	Pieczenik	02-02-1999
	AN	5,876,997	Kretz	03-02-1999
	AO	5,925,749	Mathur, et al.	07-20-1999
	AP	5,928,905	Stemmer, et al.	07-27-1999
	AQ	5,939,250	Short, Jay M.	08-17-1999
	AR	5,939,300	Robertson, et al.	08-17-1999
	AS	5,942,430	Robertson, et al.	08-24-1999
	AT	5,948,666	Callen, et al.	09-07-1999
	AU	5,958,672	Short, Jay M.	09-28-1999
	AV	5,958,751	Murphy, et al.	09-28-1999
	AW	5,962,258	Mathur, et al.	10-05-1999
	AX	5,962,283	Warren et al.	10-05-1999
	AY	5,965,408	Short, Jay M.	10-12-1999
	AZ	5,985,646	Murphy, et al.	11-16-1999
	BA	6,001,574	Short et al.	12-14-1999
Examiner Signature			Date Considered	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Substitute for form 1449A-B/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		Complete if Known	
		Application Number	09/905,660
		Filing Date	July 13, 2001
		First Named Inventor	Lorraine J. Glivar
		Group Art Unit	Unassigned
		Examiner Name	Unassigned
Attorney Docket Number	02-106820US		

	BB	6,004,788		Short	12-21-1999	
	BC	6,030,779		Short	02-29-2000	
	BD	6,054,267		Short	04-25-2000	
	BE	6,057,103		Short	05-02-2000	
	BF	6,096,548		Stemmer	08-01-2000	
	BG	6,117,679		Stemmer	09-12-2000	
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	BI	6,165,793		Stemmer	12-26-2000	
	BJ	6,168,919		Short	01-02-2001	
	BK	6,171,820		Short	01-09-2001	
	BL	6,174,673		Short, et al.	01-16-2001	
	BM	6,180,406		Stemmer	01-30-2001	
	BN	6,238,884		Short et al.	05-29-2001	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	BO	WO	97/07205		Novo Nordisk A/S	02-27-1997		
	BP	WO	97/20078		Affymax Technologies	06-05-1997		
	BQ	WO	97/25410		Novo Nordisk A/S	07-17-1997		
	BR	WO	97/35957		Maxygen, Inc.	10-02-1997		
	BS	WO	97/35966		Maxygen, Inc.	10-02-1997		
	BT	WO	97/44361		Recombinant Biocatalysis Inc.	11-27-1997		
	BU	WO	97/48416		Recombinant Biocatalysis, Inc.	12-24-1997		
	BV	WO	97/48717		Recombinant Biocatalysis Inc	12-24-1997		
	BW	WO	97/48794		Recombinant Biocatalysis Inc	12-24-1997		
	BX	WO	98/00526		Recombinant	01-08-1998		

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		Application Number		09/905,660	
		Filing Date		July 13, 2001	
		First Named Inventor		Lorraine J. Gliver	
		Group Art Unit		Unassigned	
		Examiner Name		Unassigned	
		Attorney Docket Number		02-106820US	

				Biocatalysis Inc		
BY	WO	98/01581		Recombinant Biocatalysis Inc	01-15-1998	
BZ	WO	98/13485		Maxygen, Inc.	04-02-1998	
CA	WO	98/13487		Maxygen, Inc.	04-02-1998	
CB	WO	98/24799		Diversa Corp.	06-11-1998	
CC	WO	98/27230		Maxygen, Inc.	06-25-1998	
CD	WO	98/28416		Novo Nordisk A/S	07-02-1998	
CE	WO	98/31837		Maxygen, Inc.	07-23-1998	
CF	WO	98/36080		The Dow Chemical Company	08-20-1998	
CG	WO	98/41622		Novo Nordisk A/S	09-24-1998	
CH	WO	98/41623		Novo Nordisk A/S	09-24-1998	
CI	WO	98/41653		Novo Nordisk A/S	09-24-1998	
CJ	WO	98/42832		California Institute of Technology	10-01-1998	
CK	WO	98/48034		Diversa Corp.	10-29-1998	
CL	WO	98/58085		Diversa Corp.	12-23-1998	
CM	WO	99/07837		Diversa Corp.	02-19-1999	
CN	WO	99/08539		Diversa Corp.	02-25-1999	
CO	WO	99/10472		Diversa Corp.	03-04-1999	
CP	WO	99/10539		Diversa Corp.	03-04-1999	
CQ	WO	99/19518		Diversa Corp.	04-22-1999	
CR	EP	0911396A2		Maxygen, Inc.	04-28-1999	
CS	WO	99/21979		Maxygen, Inc.	05-06-1999	
CT	EP	0911396A3		Maxygen, Inc.	05-06-1999	
CU	WO	99/23107		Maxygen, Inc.	05-14-1999	
CV	WO	99/23236		Diversa Corp.	05-14-1999	
CW	WO	99/29902		California Institute of Technology et al.	06-17-1999	

Examiner Signature	Date Considered
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		First Named Inventor	Lorraine J. Glivert		
		Group Art Unit	Unassigned		
		Examiner Name	Unassigned		
		Attorney Docket Number	02-106820US		

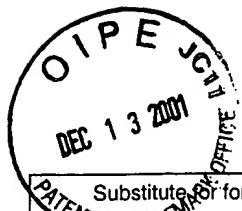
	CX	EP	0934999A1		Maxygen, Inc.	08-11-1999		
	CY	WO	99/41368		Maxygen, Inc.	08-19-1999		
	CZ	WO	99/41369		Maxygen, Inc.	08-19-1999		
	DA	WO	99/41383		Maxygen, Inc.	08-19-1999		
	DB	WO	99/41402		Maxygen, Inc.	08-19-1999		
	DC	WO	99/45154		Diversa Corp.	09-10-1999		
	DD	WO	99/57128		Maxygen, Inc.	11-11-1999		
	DE	WO	99/65927		Maxygen, Inc.	12-23-1999		
	DF	WO	00/42560		Maxygen, Inc.	07-20-2000		
	DG	WO	00/42561		Maxygen, Inc.	07-20-2000		
	DH	WO	00/53744		Diversa Corporation	09-14-2000		
	DI	WO	00/58517		Diversa Corporation	10-05-2000		

#### OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	DJ	Chang, C., et al. (1999) "Evolution of a cytokine using DNA family shuffling." <i>Nature Biotechnology</i> 17:793-797.	
	DK	Christians, F.C. et al., (1999) "Directed evolution of thymidine kinase for AZT phosphorylation using DNA family shuffling." <i>Nature Biotechnology</i> 17:259-264.	
	DL	Coco et al., (2001) "DNA shuffling method for generating highly recombined genes and evolved enzymes" <i>Nature Biotechnology</i> vol. 19 pp. 354-359	
	DM	Crameri et al., (1993) "10(20)-Fold aptamer library amplification without gel purification," <i>Nuc. Acids Res.</i> 21(18):4410.	
	DN	Crameri, A. & Stemmer W.P.C. (1995) "Combinatorial multiple cassette mutagenesis creates all the permutations of mutant and wildtype cassettes." <i>Biotechniques</i> 18:194-195.	
	DO	Crameri, A. et al. (1996) "Improved green fluorescent protein by molecular evolution using DNA shuffling." <i>Nature Biotechnology</i> 14:315-319.	
	DP	Crameri, A. et al. (1996) "Construction and evolution of antibody-phage libraries by DNA shuffling." <i>Nature Medicine</i> 2:100-103.	
	DQ	Crameri, A. et al., (1997) "Molecular evolution of an arsenate detoxification pathway by DNA shuffling." <i>Nature Biotechnology</i> 15:436-438	

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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		Application Number	09/905,660
		Filing Date	July 13, 2001
		First Named Inventor	Lorrain J. Gliv r
		Group Art Unit	Unassign d
		Examiner Name	Unassigned
		Attorney Docket Number	02-106820US

	DR	Crameri, A. et al., (1998) "DNA shuffling of a family of genes from diverse species accelerates directed evolution." <i>Nature</i> 391:288-291.	
	DS	Gates, C.M. et al., (1996) "Affinity selective isolation of ligands from peptide libraries through display on a lac repressor 'headpiece dimer'. <i>Journal of Molecular Biology</i> 255:373-386.	
	DT	Minshull, J., Stemmer, W.P.C. (1999) "Protein evolution by molecular breeding." <i>Current Opinion in Chemical Biology</i> 3:284-290.	
	DU	Ness, J. et al., (1999) "DNA shuffling of subgenomic sequences of subtilisin." <i>Nature Biotechnology</i> 17:893-896.	
	DV	Patten, P.A. et al., (1997) "Application of DNA Shuffling to Pharmaceuticals and Vaccines." <i>Current Opinion in Biotechnology</i> 8:724-733.	
	DW	Pelletier, Joelle N., (2001) "A Rachitt for our toolbox" <i>Nature Biotechnology</i> vol. 19, p. 314-315	
	DX	Stemmer, W.P.C. (1994) "DNA Shuffling by random fragmentation and reassembly: In vitro recombination for molecular evolution." <i>PNAS</i> 91:10751	
	DY	Stemmer, W.P.C. (1994) "Rapid evolution of a protein in vitro by DNA shuffling." <i>Nature</i> 370:389-391.	
	DZ	Stemmer, W.P.C. (1995) "The Evolution of Molecular Computation." <i>Science</i> 270:1510	
	EA	Stemmer, W.P.C. (1995) "Searching Sequence Space." <i>Bio/Technology</i> 13:549-553.	
	EB	Stemmer, W.P.C. (1996) "Sexual PCR and Assembly PCR." In: <i>The Encyclopedia of Molecular Biology</i> . VCH Publishers, New York. pp. 447-457.	
	EC	Stemmer, W.P.C. & Soong, N.W. (1999) "Molecular breeding of viruses for targeting and other clinical properties." <i>Tumor Targeting</i> 4:59-62.	
	ED	Zhang, J. et al., (1997) "Directed evolution of an effective fucosidase from a galactosidase by DNA shuffling and screening." <i>Proceedings of the National Academy of Sciences, USA</i> 94:4504-4509.	

Examiner Signature	Date Considered
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